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Patent Claims

1. A method for carrying out the advancing movement  
of at least one tool rest rotating about a  
5 rotationally symmetric component and which is  
capable of being fed in each case via a leadscrew,  
is supported on the component and is driven in  
rotation as a whole by a stationarily mounted main  
motor via a main transmission mechanism connected  
10 firmly to the support of the tool rest or tool  
rests, the advancing movement of each leadscrew  
being brought about in each case by the relative  
movement of a further motor-driven transmission  
mechanism cooperating with the leadscrew, in  
15 addition to the main transmission mechanism, and  
the relative movement generated by the drive in  
each case of a rest motor mounted at a fixed  
location and driving the further transmission  
mechanism, characterized in that the rest motor is  
20 synchronously driven in rotation as a whole by the  
main motor with the aid of a mechanical coupling  
to the latter.
2. The method as claimed in claim 1, characterized in  
25 that each rest motor is braked in the event of a  
feed of zero.
3. A feed device for a working machine for the  
surface machining of rotationally symmetric  
30 components (1), with a stationarily mounted main  
motor (8) and with a main transmission mechanism  
for transmitting the drive movement from the main  
motor (8) to at least one tool rest (4) which  
rotates about the component (1) and is capable of  
35 being fed on at least one leadscrew (5), and which  
is supported by means of a rest mounting (3) on

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the component (1), each leadscrew (5)

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5 being capable of being driven by a further transmission mechanism and the latter by a fixed rest motor (13), characterized in that the housing of the rest motor (13) is mounted rotatably and is coupled mechanically to the main motor (8) and is thus capable of being driven synchronously in rotation by the latter.

10 4. The feed device as claimed in claim 3, characterized in that the main transmission mechanism is an externally toothed gear ring (6) driven by a pinion (7) seated on the motor shaft of the main motor (8).

15 5. The feed device as claimed in claim 3 or 4, characterized in that the main transmission mechanism is an externally toothed gear ring driven by the motor shaft of the main motor via a toothed belt.

20 6. The feed device as claimed in one of claims 3 to 5, characterized in that the further transmission mechanism is an externally and internally toothed gear ring (12) driven by a pinion (11) seated on the motor shaft of the rest motor (13).

25 7. The feed device as claimed in one of claims 3 to 6, characterized in that the further transmission mechanism is an externally and internally toothed gear ring driven by the motor shaft of the rest motor via a toothed belt.

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8. The feed device as claimed in one of claims 3 to 7, characterized in that each rest motor (13) is equipped with a slip ring set (15) for the transmission of power to its windings.
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9. The feed device as claimed in one of claims 3 to 8, characterized in that the further transmission mechanism is mounted rotatably on a support (10) of the main motor (8).
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10. The feed device as claimed in one of claims 3 to 8, characterized in that the further transmission mechanism is mounted rotatably on the rest mounting (3) of the tool rest (4).
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11. The feed device as claimed in one of claims 3 to 10, characterized in that the main motor (8) is coupled mechanically to the housing of the rest motor or rest motors (13) via toothed belts (14).
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12. The feed device as claimed in one of claims 3 to 10, characterized in that the main motor is coupled mechanically to the housing of the rest motor or rest motors via gearwheel mechanisms.
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13. The feed device as claimed in one of claims 3 to 12, characterized in that the rest motor (13) is a brake motor.